

E1
Cont'd
10 kg/m³;

wherein said thermal-acoustic insulation material is non-galvanic corrosive.

E2
3. (Three Times Amended) A thermal-acoustic insulation material as in claim 1, wherein said anisotropic pitched-based carbon fibers have an average fiber diameter of from 0.5 μm to 1.0 μm .

10. (Four Times Amended) A method of manufacturing a thermal-acoustic insulation material, comprising the steps of:

E3
producing spun fibers having an average fiber diameter less than 2 μm and an average fiber length of 1 mm to 15 mm by heating and melting anisotropic pitch obtained by polymerizing condensed polycyclic hydrocarbon, then discharging a melted matter out of a spinning nozzle and at the same time, blowing a heated gas from around the spinning nozzle in the same direction to which the melted matter is discharged;

manufacturing non-galvanic corrosive carbon fibers by infusibilizing spun fibers and thereafter carbonizing said carbon fibers at not lower than 550°C. but lower than 800°C.;

forming a carbon fiber aggregate by aggregating and compressing said non-galvanic corrosive carbon fibers to a bulk density of from (3 - b) kg/m³ to (10 - b) kg/m³;

spraying a thermosetting resin solution to said carbon fibers so that the amount of a thermosetting resin in relation to the amount of the carbon fiber aggregate is made to be b, where b

is an arbitrary number fixed so that the bulk density is positive and the relationship $0.3 \leq b \leq 4$ is satisfied; and

curing the thermosetting resin by heating the carbon fiber aggregate sprayed with the thermosetting resin solution to manufacture a three dimensional structure of carbon fibers wherein said carbon fibers are bonded at contact points thereof, said three-dimensional structure having a bulk density of from 3 kg/m^3 to 10 kg/m^3 .

1
11. (Amended) A method of manufacturing thermal-acoustic insulation material, comprising the steps of:

producing spun fibers having an average fiber diameter less than $2 \mu\text{m}$ and an average fiber length of 1 mm to 15 mm by heating and melting anisotropic pitch obtained by polymerizing condensed polycyclic hydrocarbon, then discharging a melted matter out of a spinning nozzle and at the same time, blowing a heated gas from around the spinning nozzle in the same direction in which the melted matter is discharged;

manufacturing non-galvanic corrosive carbon fibers by infusibilizing said spun fibers and thereafter carbonizing said spun fibers at not lower than 550°C . but lower than 800°C .;

forming a carbon fiber aggregate having a bulk density less than 1.3 kg/m^3 by aggregating said non-galvanic corrosive carbon fibers;

spraying a thermosetting resin solution to the carbon fiber aggregate; and

curing the thermosetting resin by compressing and heating the carbon fiber aggregate sprayed

Ed.
Contd.

with the thermosetting resin solution to bond contact points of said carbon fibers and thereby manufacture a three dimensional structure of carbon fibers having a bulk density of from 3 kg/m³ to 10 kg/m³.

Es

²
42. (Amended) A method of manufacturing a thermal-acoustic insulation material as in claim ¹1, wherein in said step of forming a carbon fiber aggregate, said non-galvanic corrosive carbon fibers are opened by the air and dropped from a height of at least 100 cm or higher onto a plane.

Es

42. (Amended) A method of manufacturing a thermal-acoustic insulation material as in claim 10, a temperature of carbonizing the spun fibers is not lower than 650°C. but lower than 750°C.

Es

³
43. (Twice Amended) A method of manufacturing a thermal-acoustic insulation material as in claim ¹1, wherein a temperature of carbonizing the spun fibers is not lower than 650°C. but lower than 750°C.
